J9312B

46

# INDEX 1958

# INDUSTRIAL DIAMOND REVIEW

**VOLUME 18 (New Series)**

**JANUARY to DECEMBER 1958**

**Nos. 206 to 217**

---

*Editor: E. M. Bruton*

*Managing Editor: Patrick Greene*

---

**AUTHORS INDEX . page ii**

**SUBJECT INDEX . page ii**

**NAME INDEX . page v**

N.A.G. PRESS LTD., 226 LATYMER COURT, HAMMERSMITH, LONDON, W.6

# INDUSTRIAL DIAMOND REVIEW

VOLUME 18 (New Series) JANUARY to DECEMBER 1958 Nos. 206 to 217

## KEY TO PAGE NUMBERS


No 206 pp 5-20
No 207 pp 25-40
No 208 pp 45-60
No 209 pp 65-80
No 210 pp 85-100
No 211 pp 105-120
No 212 pp 125-140
No 213 pp 145-160
No 214 pp 165-180
No 215 pp 185-200
No 216 pp 205-220
No 217 pp 225-240


## AUTHORS INDEX


ADAMANT. Generally speaking
Jan 5
Feb 25
Mar 45
Apr 65
May 85
June 105
July 125
Aug 145
Sep 165
Oct 185
Nov 205

BRUECHE, E., POPPA, H. The polishing of glass 29

McLEOD, G. M. See MOYERS, W. R. 15

MARSHALL, N. K. An ultrasonic drill for boring small holes in hard materials 17

MINISTR, Z. New opinions on grinding and polishing especially of metallographic specimens
Pt I 7
Pt II 26

MINISTR, Z. Semi-automatic grinding of metallographic specimens of very hard materials
Pt I 166
Pt II 190

MOYERS, W. R., McLEOD, G. M. Accurate measurement of the hole size of fine gauge diamond dies 15

OBERG, D. E. How to grind carbide dies
Pt I 116
Pt II 132

O'HARA, T. A. Blast hole diamond drilling at Flin-Flon
Pt I 153
Pt II 172

PAHLITZSCH, G., RAFFLENBEUL, G. Grinding sintered carbide, especially sintered carbide cutting tools, with diamond grinding wheels
Pt I 225

PALM, A. I. Regrinding Sendzimir mill work rolls 10

PLOEGSMA, A. W. Fabrication of sapphire and diamond styli for gramophone pick-ups 209

POPPA, H. See BRUECHE, E. 29

RAFFLENBEUL, G. See PAHLITZSCH, G. 225

REA, R. F., RIPPLE, J. W. Cutting and grinding ceramics 52

REUSS, C. E. In-plant diamond mines are expensive . . . spot yours and save
Pt I 96
Pt II 106
Pt III 126
Pt IV 146

RIPPLE, J. W. See REA, R. F. 52

RIPPLE, J. W. How to dress diamond wheels for best performance 174

SATTA, V. A few aspects of the chemical reactions occurring during the use of abrasives 94

SEAL, M. Friction and wear of diamond 67

STERL, K. Diamond machining and thread cutting on aluminium 206

SWIMMER, J. Diamond powder recovery with heavy liquids
Pt I 136
Pt II 149

WALLER, J. Wheel truing with an hydraulic attachment 91

WALLER, J. A four-facet diamond truer 196

WALLER, J. Finishing aluminium valve bodies with diamond tools 237


### ADDITIONAL ARTICLES


... Accurate attachment for forming grinding wheel contours 195
... BSA centreless grinder No 4 46
... Baker-Pera tool grinding attachment 66
... Bigger-and-better Gauge & Tool Exhibition 86
... Demonstration of Lapmaster lapping equipment 237
... 'Diamanta' precision boring machines 38
... Diamond-point engraving on glass 170
... Electrical diamond die drilling 214
... Endia angle and relief truing fixture 58
... Engraved glass church windows 213
... Expo 58—Brussels Universal Exhibition 89
... Indexing truing device 194
... Industrial diamonds in the United States 218
... Instruments, Electronics, and Automation Exhibition 90
... Italian Machine Tool Exhibition 186
... Mobile demonstration van 50
... New Reishauer profiling machine 51
... Quarrying by on-site sawing 113
... 'Storied windows richly dight' 49
... Studies on the surfaces of diamond 74


## SUBJECT INDEX


**Abrasion**
sintered carbide 228
**Abrasive**
alumina 167, 168
aluminium oxide 237
boron carbide 167, 192
grinding wheels 53
hardness 167
hardness evaluation 53
in liquid suspension for lapping 53
in liquid suspension for finishing 53
silicon carbide 167, 174, 237
use 94
**Accuracy of measuring** 228
**Airflush drilling** 87
**Alumina** 167, 168, 237
**Aluminium**
finishing with diamond tools 235
milling 235
**Aluminium Oxide** 167, 168, 237
dressing wheel 176
**Analysis of polymer** 99
**Angle-Set mitre gauge** 5
**Angle truing fixture** 58
**Apparatus for grinding sintered carbide** 226
**Arrangement of diamond**
four-facet, in truing tool 197
in tool 235
**Attachment for form grinding wheel contours** 195

**Automatic**
sieves 217
sizing device 46
tester for measurement of electrical circuit 112
**Automation**
Congress 16
Exhibition 59

**Baker-Pera tool grinding attachment** 66
**Beilby layer** 34
**Belgian fossil** 113
**Bench grinding and lapping machine** 77
**Blasthole diamond drilling** 153, 172
**Bond**
diamond grinding wheels 99
grinding wheels 54
**Bonding**
electrical 87
materials 87
**Boron carbide** 8, 94, 167, 192
**Brake-controlled dresser** 133
**Bronze-bonded diamond grinding wheels** 50
**Brussels Exhibition** 59, 89
**Bruting of diamond** 67

**Carbide**
boron 8, 94, 167, 192
burrs for glass engraving 213
dies 116
cleaning 133, 135
grinding 132
grinding with diamond wheels 96, 133
with peripheral diamond grinding wheels 87
tools
diamond finishing 97
finish grinding with diamond wheel 45
finishing 77
grinding with resinoid-bonded diamond wheels 106
**Carbon dioxide, coolant comparison** 109
**Carving greenstone** 234
**Centreless grinder** 46, 187
**Centrifuge** 152
**Ceramic oxide tools research** 6
**Ceramics** 52
cutting 52
grinding 52, 53, 54
**Chamois fabrics for finishing**
fine imitation 193
**Checking device, sieve** 65
**Chemical reactions** 94
**Chipbreaker grinding wheels** 87

**Chipping problem in resinoid-bonded grinding wheels** - - 54
**Circular saw**
metal cutting - - - - 145
stone cutting - - - - 205
**Cleaning**
carbide dies - - - - 133, 135
diamond - - - - - 69
diamond grinding wheel 110, 174, 176
**Cleavage face etching** - - - 76
**Concrete cutting saw** - - - 86
**Congress on automation** - - 16
**Conservation of diamond** - - 96
**Construction of four-facet diamond truing tool** - - - 196
**Control**
equipment - - - - - 88
grinding wheels - - - - 14
production and quality, projectors 88
**Conversion chart** - - - - 123
hardness - - - - - 234
strength - - - - - 234
temperature - - - - - 234
**Coolant** - - 14, 108, 109, 118, 147
grinding - - - - - - 55
sintered carbide - - - 227
liquid - - - - - - 94
system for gear profiling machine 51
**Coring bit** - - - - - 87
**Corundum** - - - - 94, 95
**Costs**
diamond drilling - - - - 173
tool replacements - - - - 5
**Countersinks** - - - - - 87
**Crack**
ring - - - - - - 77
square-shaped - - - - 77
**Cracking of glass** - - - 29
**Crystal**
cutting with diamond powder - 185
cutting with diamond tools - 185
lapping with diamond powder - 185
lapping with diamond tools - 185
growth in diamond - - - 75
growth for micron wire - - 6
**Cup wheels** - - - - - 86
**Cutting**
ceramics - - - - - 52
concrete with diamond-impregnated blade - - - - 205
crystals with diamond powder - 185
crystals with diamond tools - 185
edge smoothness - - - 228
glass with diamond tools - - 49

**Damage to diamond grinding wheels** - - - - - - - 108
**Deformation of diamond points** 70
**Dentacryl moulding plastic** - 168
**Deposition process** - - - 148
**Design points in diamond tools** - 237
**Diamanta boring machine** - - 38
**Diamond**
abrasive - - - - - - 53
ultrasonic machining - - 90
assisted electrolytic grinding - 105
bits - - - - - - - 153
blades for germanium slicing machine - - - - - 130
blades for microtome knife - 86
bruting - - - - - - 67
cleaning - - - - - - 69
compound syringe applicator - 87
conservation - - - - - 96
cutting industry - - - - 89
crystal growth - - - - 75
dies - - - - - - - 16
electrical drilling - - - 214
finishing - - - - - 216
inspection - - - - - 16
measuring hole size - - - 15
polishing - - - - - 216
resizing - - - - - - 15
distribution of industrials - - 218
dressing tools - - - - - 187
drilling - - - - - 28, 67, 105
bit - - - - - - - 126
blasthole - - - - - 153, 172
costs - - - - - - - 173
tools - - - - - - - 206
drills - - - - - - - 153, 154
greenstone carving - - - 234
dry salvage - - - - - - 147
dust for sawing of diamond - 67
edge for smoothness testing of cutting edge - - - - - 228
engraving - - - - - - 6
etching - - - - - - 74, 75
file - - - - - - - - - 165
**finishing**
carbide tools - - - - 97
tungsten carbide - - - - 238
**four-facet truing tool** - - - 196
**friction** - - - 67, 68, 69, 70, 72
**glass**
cutter - - - - - - 49, 78
working tools - - - - - 87
**grinding wheel** - 49, 78, 108, 225
bond - - - - - - - 99
bronze-bonded - - - - 50
cleaning - - - 110, 174, 176
damage - - - - - - 108
dressing - - - - - 174, 228
finish grinding of carbide tools 45
greenstone carving - - - 234
grinding carbides - - 96, 133
grinding sintered carbides 225, 227
heat - - - - - - - 108
identification system - - 147
mesh size - - - - 98, 234
metal-bonded - 54, 90, 107, 126
peripheral wheels for carbide grinding - - - - - 87
precision grinding - - - 112
resinoid-bonded - - - 106
wear - - - - - - - 234
**holder for four-facet truing tool** 198
**hones** - - - - - - 176, 177
**honing** - - - - - - - 238
**impregnated**
blade for cutting concrete - 205
furnace drills - - - - 87
grinding wheels - - 86, 125
hones - - - - - - 125
**internal growth** - - - - 75
**lapping wheels, resinoid-bonded** 88
**man-made** - - - - - 146
**microstructure of surfaces** - 74
**mining** - - - - - - 89
**oppositely matched faces** - - 76
**orientation** - - - - - 72
diamond tools - - - - 125
**oriented setting** - - - - 78
**particles** - - - - - - 148
**paste**
finish grinding metallographic specimens - - - - - 193
loaded brass drill - - - 17
polishing metallographic specimens - - - - - 27
ring lapping - - - - 14
**points**
deformation - - - - 70
glass engraving - 91, 170, 172, 213
microscopic glass engraving - 85
**polishing** - - - - - - 67
metallographic specimens - 27
**powder** - - - - 90, 167, 205
crystal cutting - - - - 185
crystal lapping - - - - 185
fine grinding of metallographic specimens - - - - 27
grinding of metallographic specimens - - - - - 9
polishing metallographic specimens - - - - - - 9
recovery with heavy liquids - 149
**production for tools** - - - 178
**reclamation** - - - - - 147
**recovery** - - - - - - 212
diamond swarf - - - - 127
heavy liquids - - - - 136
methods - - - - - 218
**salvage** - - - - - - 97
**saw for stone cutting** - - - 113
**sawing** - - - - - - 78
with metal disk - - - - 67
**slide, double ended** - - - 91
**styli** - - - - - 209, 210
mounting - - - - - 212
**stylus**
surface finish tester - - - 238
surface finish testing - - - 228
**surface stress tester** - - - 118
**swarf recovery** - - - - 127
**tools** - - - 50, 89, 146, 188
arrangement - - - - 235
crystal cutting - - - - 185
crystal lapping - - - - 185
cutting hard materials - - 89
design points - - - - 237
dressing - - - - - 130
drilling hard materials - - 89
electro - - - - - 148
electro-deposition process - 217
fast truing - - - - - 128
finishing aluminium - - - 235
grinding hard materials - - 89
life - - - - - - - 208
machining aluminium - - 206
mobile demonstration van - 50
orientation of diamond - - 125
truing - - - - - 146, 158
turning - - - - - - 206
type - - - - - - - 235
x-ray orientation - - - 158
**truing device** - - - - 51
hydraulic attachment - - 91
**wear** - - - - - - 67, 68
**Dies, diamond**
measuring hole size - - - 15
resizing - - - - - - 15
**Distribution of industrial diamonds** - - - - - - - 218
**Double-ended diamond slide** - 91
**Dresser**
brake-controlled - - - - 133
diamond - - - - - - 187
**Dressing**
aluminium oxide wheel - - 176
diamond grinding wheel - 174, 228
peripheral wheel - - - 110
rotating tool with metal-bonded diamond wheel - - - - 90
tools - - - - - - 130
precision contours - - - 88
radius work - - - - 88
thread forming - - - - 88
wheel with small fixture mount - 176
**Drill**
brass, diamond paste loaded - 17
rods - - - - - - - - 154
stand for masonry drills - - 87
**Drills**
all-coring rock - - - - 87
diamond - - - 153, 154, 206
glass - - - - - - - 87
masonry drill stand - - - 87
**Drilling**
air-flush - - - - - - 87
diamond - - - - 28, 67, 105
bit - - - - - - - 126
electrical, of diamond dies - - 214
electrolytic - - - - - 215
patterns - - - - - - 157
practice - - - - - - 156
ultrasonic - - - - - 17, 90
**Dynaflow transmission** - - 112

**Edging machine** - - - - 50
pencil - - - - - - 177
**Electrical**
bonding process - - - - 87
circuit measurements automatic tester - - - - - - 112
drilling
diamond dies - - - - 214
high voltage sparks - - - 214
needle - - - - - - 215
**Electro-deposition process for diamond tools** - - - 217
**Electro-diamond tools** - 87, 148
**Electrolytic**
drilling - - - - - - 215
grinding - - - - - 126, 146
diamond assisted - - - 105
polishing of metals - - - 10
**Electronics Exhibition** - - - 59
**Electro-spark grinding** - 126, 127
**Emery for glass grinding** - - 30
**Engine, turbo-jet** - - - 112
**Engraved glass windows** - 185, 213
**Engraving**
diamond - - - - - - 6
glass
carbide burrs - - - - 213
diamond-point - 91, 170, 172, 213
microscopic - - - - - 85
wheel - - - - - - - 170
**Equipment**
control - - - - - - 88
lapping - - - - - - - 237
spark machining - - - - 16
spark erosion machining - - 78
surface hardening - - - 86
ultrasonic flaw detection - - 90
**Etching**
cleavage faces - - - - 76
diamond - - - - - 74, 75
**Evaluation of hardness of abrasives** - - - - - - - - 53
**Exhibition**
Automation - - - - - 59
Brussels - - - - - 59, 89
Electronics - - - - - - 59

Instruments - - - - - - 59
Machine Tools - - - - - 186
Physical Society - - - - - 65
**Experimental method of grinding sintered carbide** - - - 226
**Explosive (Forcite)** - - - 172

**Fabric fibres for polishing** - - 27
**Faces, oppositely matched** - 76
**Fast truing** - - - - - - 128
**Feeds for grinding ceramics** - 56
**File, diamond** - - - - 165
**Fine grinding**
glass with emery - - - - - 30
metallographic specimens with diamond powder - - - 27
**Finish grinding carbide tools with diamond wheel** - - - - 45
**Finishing**
aluminium with diamond tools - 235
carbide tools - - - - - 77
with diamond - - - - 97
diamond dies - - - - 216
fine imitation fabric - - - 193
machine for worm gears - - 51
metallographic specimens with diamond paste - - - - 193
**Flaw detection equipment, ultrasonic** - - - - - - - 90
**Forcite** - - - - - - - 172
**Form grinding wheel contours attachment** - - - - - 195
**Form tools** - - - - - 87
**Form-truing process** - - - 195
**Friction of diamond** 67, 68, 69, 70, 72
**Furnace drills, diamond-impregnated** - - - - - - 87

**Gauge, Angle-Set mitre** - - 5
**Gear**
finishing machine - - - - 51
grinding machine - - - - 51
profiling machine, coolant system 51
reprofiling machine - - - 51
**Germanium slicing machine** - 130
**Glass**
cracking - - - - - - - 29
cutting - - - - - - 49, 78
diamond cutter - - - - - 78
drills - - - - - - - - 87
edging machine - - - - 50
engraving
diamond point - 91, 170, 172, 213
carbide burrs - - - - 213
engraved windows - - 185, 213
grinding - - - - - 29, 190
with emery - - - - 30
process - - - - - 35
pencil edging machine - - - 177
plastic deformation - - - - 30
polishing - - - - - 29, 33
process - - - - 32, 35
scratch hardness - - - - 30
surface layer - - - - - 33
windows, stained - - - - 49
working tools, diamond - - 87
**Glaziers' diamond** - - - 49
**Gramophone pick-ups** - - - 209
**Greenstone carving** - - - 234
diamond drill - - - - - 234
diamond wheels - - - - 234
**Grinders** - - - - - - 186
centreless - - - - - 46, 187
internal - - - - - 86, 87
metallographic - - - - 169
oscillating - - - - 86, 146
peripheral type wheel - - 116
sintered carbide - - - - 226
surface - - - - - - 187
tool - - - - - - 86, 217
**Grinding**
auxiliaries - - - - - 94, 95
Baker-Perkins attachment for tools 66
carbide dies - - - - - - 132
carbide tools - - - - - 106
carbides with diamond wheels 96, 133
carbides with peripheral grinding wheels - - - - - - 87
ceramics - - - 52, 53, 54
coolants - - - - - - - 55
electrolytic - - - - 126, 146
diamond assisted - - - 105
electro-spark - - - 126, 127
equipment for sintered carbide grinding - - - - - - 226
feeds - - - - - - - - 56
finishing metallographic specimens 193
glass - - - - - - 29, 190
process - - - - - - 35
instrument - - - - - - 14
machine for worm gears - - 51
metallographic specimens 7, 26, 166, 168, 190
grey cast-iron lapping wheel - 192
silicon carbide - - - - 192
plunge-cut - - - - - 207
sintered carbide
apparatus - - - - - 226
coolant - - - - - - 227
diamond grinding wheels - 225
experimental method - - 226
research survey - - - - 230
speed - - - - - - 56, 225
ultrasonic - - - - - 126, 127
wheels - - - - - - - 146
abrasive - - - - - - 53
bonds - - - - - - - 54
chipbreaker - - - - 87
contour attachment - - 195
control - - - - - - - 14
cup - - - - - - - 86
diamond - - - - - - 87
diamond-impregnated - 86, 125
problem of chipping in resinoid bond - - - - - - - 54
recommendations for Sendzimir mill work rolls - - - 12
resinoid bond with bakelite core 132
selection - - - - - - 54
silicon carbide, resinoid-bonded 54
silicon carbide, vitrified-bonded 54
wear - - - - - - - 229
**Growth of crystal for micron wire** - - - - - - - - 6

**Hardness**
abrasives - - - - - - - 167
evaluation - - - - - 53
conversion card - - - - - 234
readings - - - - - - - 6
scratch, glass - - - - - - 30
testers - - - - - - - 88
**Heavy liquids**
diamond recovery - - - 136
diamond powder recovery - - 149
**High voltage sparks, electrical drilling** - - - - - - - 214
**Hones**
diamond - - - - 176, 177
diamond-impregnated - - - 125
**Honing**
diamond 238
stones - - - - - - - 87
**Hydraulic attachment for diamond truing device** - - - 91

**Identification system for diamond grinding wheels** - - 147
**Indexing truing device** - - 194
**Industrial diamonds, distribution** - - - - - - - 218
**Infeed** - - - - - - 108
**Insert bits, throwaway** - - 50
**Inspection**
diamond dies - - - - - 16
optical device - - - - 198
**Instruments Exhibition** - - 59
**Interferometric optical techniques for studying diamond surfaces** - - - - - - 74
**Interferometry, multiple-beam** 69
**Internal**
grinders - - - - - - 86, 87
growth of diamond - - - 75

**Lapidary attachment for polishing machine** - - - - - 178
**Lapping**
abrasive in liquid suspension - 53
compounds - - - - - - 146
crystals
diamond powder - - - 185
diamond tools - - - - 185
equipment - - - - - 237
oscillating machine - - - 86
ring with diamond paste - - 14
**Layers of glass surface** - - 33
**Lens edging machine** - - - 135

**Machine**
bench grinding - - - - - 77
boring (Diamanta) - - - 38
finishing of worm gears - - 51
gear grinding - - - - - 51
glass, pencil edging - - - 50
grinding of worm gears - - 51
lapping - - - - - - - 77
lens edging - - - - - - 135
pencil edging - - - - - 50
profiling - - - - - - - 51
re-profiling of worm gears - - 51
slicing germanium - - - - 130
tool cutting - - - - - - 86
tool grinding - - - - - - 86
**Machine Tool Exhibition, Italian** 186
**Machining**
aluminium with diamond tools - 206
ceramics, tolerances - - - 52
spark erosion equipment - - 78
ultrasonic - - - - - - 90
**Man-made diamonds** - - - 146
**Measurement**
electrical circuit, automatic tester 112
statistics - - - - - - - 228
**Measuring**
accuracy - - - - - - - 228
hole size of diamond dies - - 15
methods - - - - - - - 228
**Mesh size of diamond grinding wheel** - - - - - - 98, 234
**Metal**
bonded diamond grinding wheels 54, 107, 126
dressing of rotating tools - 90
cutting, circular saw - - - 145
disk for sawing diamond - - 67
electrolytic polishing - - - 10
**Metallographic**
grinder - - - - - - - 169
grinding - 7, 26, 166, 168, 190
with diamond powder - 9
with grey cast-iron lapping wheel - - - - - 192
with silicon carbide - - 192
plastic for mounting - - 26
polishing - - - - 7, 26, 168
with diamond powder - 9
preparation - - - - - 168
specimens
fine grinding with diamond powder - - - - - 27
finish grinding with diamond paste on paper - - - 193
**Methods of measuring** - - 228
**Methylene iodide** - - - - 136
**Microscopic glass engraving** - 85
diamond-point - - - - 85
**Microgeometer** - - - - 228
**Microstructure of diamond surfaces** - - - - - - - 74
**Microtome knife** - - - - 86
**Mill**
cluster - - - - - - - 10
Sendzimir - - - - - - 10
for work rolls - - - - 10, 12
**Milling aluminium** - - - - 235
**Mining of diamond** - - - 89
**Mobile demonstration van for diamond tools** - - - - 50
**Moulding plastic Dentacryl** - 168
**Mounting**
diamond styli - - - - - 212
plastics for metallographic specimens - - - - - - - 26
sapphire styli - - - - - 212
**Multiple-beam interferometry** 69

**Needle for electrical drilling** - 215

**Oakalloy carbide tools** - - 112
**Obituary**
Joseph C. Ginder - - - - 28
A. J. Hewitt, O.B.E. - - - 78
Dr. J. T. Williamson, M.A., B.Sc. 28
**Optical inspection device** - - 198
**Orientation of diamond** - - 72
**Oriented setting of diamond** - 78
**Oscillating**
grinder - - - - - 86, 146
lapping machine - - - - 86

**Packaging of throwaway insert bits** - - - - - - - 50
**Pantograph** - - - - - - 87
**Pencil edging machine** - - 50
glass - - - - - - - 177

**Peripheral**
diamond grinding wheels for carbide grinding - - - - - 87
**wheel** - - - - - - - 116
dressing - - - - - - 110
truing - - - - - - 110
**Photographic paper as support for polishing metallographic specimens with diamond** - 27
**Physical Society Exhibition** - 65
**Plastic deformation of glass** - 30
**Plastics for mounting of metallographic specimens** - - - 26
**Plunge-cut grinding** - - - 207
**Polishing**
diamond - - - - - - 67
dies - - - - - - - 216
fabric fibres - - - - - 27
glass - - - - - - 29, 33
process - - - - 32, 35
machine with lapidary attachment 178
metallographic specimens 7, 26, 168
with diamond paste on paper - 27
on photographic paper used as support - - - - - - 27
synthetic chamois cloth (Selvyt) 27
**Polymer analysis** - - - 99
**Powder metallurgy** - - - 216
**Precision grinding with diamond wheels** - - - - - - 112
**Preparation of metallographic specimens** - - - - - 168
**Problem of chipping of resinoid-bonded grinding wheels** - - 54
**Process**
electrical bonding - - - - 87
form truing - - - - - 195
glass
grinding - - - - - 35
polishing - - - - 32, 35
**Producing diamonds for tools** - 178
**Profiling machine** - - - - 51
**Projectors for production and quality control** - - - - 88

**Rayleigh-Beilby layer** - - 33
**Readings of hardness** - - - 6
influence of stress - - - - 6
**Reaming**
shell - - - - - - - 154
ultrasonic - - - - - 90
**Reclamation of diamond** - - 147
**Recovery**
diamond - - - - - 136, 212
methods - - - - - - 218
diamond powder with heavy liquids - - - - - 149
**Relief truing fixture** - - - 58
**Re-profiling machine for worm gears** - - - - - - - 51
**Research**
ceramic oxide tools - - - 6
sintered oxide tools - - - 6
survey on grinding sintered carbide - - - - - - - 230
**Resinoid-bonded**
diamond wheel - - - - 106
diamond lapping wheel - - - 88
grinding wheel
bakelite core - - - - 132
problem of chipping - - 54
silicon carbide - - - - 54
**Resizing diamond dies** - - 15
**Ring-crack** - - - - - - 77
**Ring lapping with diamond paste** 14
**Rock drills, all-coring** - - - 87

**Salvage of diamonds** - - - 97
dry - - - - - - - 147
**Sapphire styli** - - - - - 209
mounting - - - - - - 212
**Saw**
cutting concrete - - - - 86
circular metal cutting - - - 145
circular stone cutting - - - 205
diamond stone cutting - - - 113
**Sawing of diamond** - - - 78
metal disk charged with diamond dust - - - - - - 67
**Scratch hardness of glass** - - 30
**Selvyt synthetic chamois polishing cloth** - - - - - - 27
**Selection of grinding wheels** - 54
**Sharpening single point carbide tools** - - - - - - 126
**Sieve**
automatic - - - - - - 217
checking device - - - - - 65
**Sigmatrol sizing unit** - - - 46
**Silicon carbide** 53, 94, 167, 174, 237
resinoid-bonded grinding wheels 54
vitrified-bonded carbide wheels 54, 176
**Single-point carbide tools, sharpening** - - - - - - - 126
**Sintered carbide**
abrasion - - - - - - - 228
grinding with diamond grinding wheels - - - - - 225, 227
plates - - - - - - - 227
surface finish of ground surface - 228
**Sizing device, automatic** - - 46
**Slicing machine for germanium** 130
diamond blades - - - - - 130
**Small fixture mount for dressing wheel** - - - - - - - 176
**Smoothness of cutting edge** - 228
**Spark machining** - - - - 16
equipment - - - - - - 16
**Spark-erosion machining equipment** - - - - - - - 78
**Speed limitations of vitrified-bonded grinding wheels** - - 54
**Speeds for grinding ceramics** - 56
**Square-shaped cracks** - - - 77
**Stained glass windows** - - 49
**Stone**
circular saw - - - - - 205
diamond cutting saw - - - 113
**Strength conversion card** - 234
**Stress (affecting hardness readings)** - - - - - - - 6
**Studying techniques, interferometric-optical** - - - - 74
**Styli**
diamond - - - - 209, 210
mounting - - - - - - 212
sapphire - - - - - - 209
**Surface**
finish
ground sintered carbide surfaces 228
tester - - - - - - - 158
with diamond stylus in probe 238
testing with diamond stylus - 228
finishing with abrasive used in liquid suspension - - - 53
glass - - - - - - - 33
grinders - - - - - - 187
hardening equipment - - - 86
pressure when grinding sintered carbide - - - - - - 225
stress tester for diamonds - - 118
**Synthetic chamois polishing cloth (Selvyt)** - - - - 27
**Syringe applicator for diamond compound** - - - - - 87

**Table-type wheel truer** - - 217
**Tapping, ultrasonic** - - - 90
**Temperature conversion card** 234
**Tester**
surface finish - - - - - 158
surface stress in diamond - - 118
**Threading, ultrasonic** - - - 90
**Throwaway insert bits** - - 50
**Tolerances** - - - - - 15
**Tool**
grinder - - - - - - - 217
grinding attachment, Baker-Pera 66
replacement costs - - - - 5
**Tools**
Oakalloy carbide - - - - 112
diamond - - - - - - 89
glass working - - - - 87
electro-diamond - - - - 87
producing diamonds - - - 178
truing - - - - - - - 87
turning - - - - - - - 87
**Transistors** - - - - - - 185
**Trigons** - - - - - - - 74
**Truing**
device - - - - - - - 47
diamond - - - - - - 51
indexing - - - - - - 194
table type - - - - - - 217
fixture
angle - - - - - - - 58
relief - - - - - - - 58
peripheral wheel - - - - 110
tools - - - - - - 87, 130
diamond - - - - - - 158
four-facet diamond - - - 196
**Tungsten carbide finish** - - 238
**Turbo-jet engine** - - - 112
**Turning tools** - - - - - 87
diamond - - - - - - 206
**Twist drill magnifier** - - - 112
**Type of diamond tool** - - - 235

**Ultrasonic**
drill fabrication - - - - - 17
drill manufacture - - - - - 17
drilling - - - - - - 17, 90
flaw detection equipment - - 90
grinding - - - - - - 126, 127
machining - - - - - - 90
diamond abrasive - - - 90
reaming - - - - - - - 90
tapping - - - - - - - 90
threading - - - - - - - 90

**Vernier scales** - - - - - 6
**Vitrified-bonded wheels**
limitation of speed - - - - 54
silicon carbide - - - - - 54

**Wear**
diamond - - - - - 67, 68
grinding wheel - - - - - 234
grinding wheel - - - - - 228
**Wheel**
attachment for form grinding of contours - - - - - - - 195
engraving - - - - - - 170
forming device - - - - - 158
selection - - - - - - - 97
silicon carbide (vitrified-bonded) 176
table type truer - - - - - 217
**Windows**
engraved glass - - - - 185, 213
stained glass - - - - - - - 49
**Wire, crystal growth for micron** 6

**X-ray oriented diamond tools** 158


# NAME INDEX*


**AIT Diamond Tool Co** - - 148
**ASME** See **Am Soc Mech Engs**
**ASTE** See **Am Soc Tool Engs**
**Abel, J.** - - - - - - - 136
**Abrasive Dressing Tool Co** - 158
**Adamant** 5, 6, 66, 86, 106, 126, 145, 166, 185, 205
**Adamas Carbide Corp** - - 50
**Adamson, P.** - - - - - - 28
**Agarwala, R. P.** - - - - - 8
**Air Reduction Co Inc** - - - 148
**Albani, Officine Giuseppe** - 187
*Aluminium* - - - - - - 206
**Am Chem Assoc** - - - - 94
**Am Coldset Corp** - - 158, 217
**Am Soc Mech Engs (ASME)** - 6
**Am Soc Tool Engs (ASTE)** 78, 106, 112
**Anocut Engg Co** - - - 126, 148
**Armour Res Foundation** - - 78
**Austin, E. M.** - - - - 69, 74
**Autoflow Engg Ltd** - - - - 50


* Names of journals and publications are set in *italics*.

BSA Tools Group - - - - - 46
Bacco & Co - - - - - - 178
Baker, L. - - - - - - - 198
Baker of Holborn Ltd, C. - - 66
Barbot, C. - - - - - - 66
Bay State Abrasive Co - - - 148
Bayer - - - - - - - - 36
Behr Manning Co - - - 97, 148
Beilby, G. T. - - - 31, 33, 34, 35
Belgians, King of - - - - - 89
Bertoni & Cotti - - - - - 187
Black & Decker Mfg Co - 45, 147
Blazek, S. - - - - - - - 168
Blecker, G. R. - - - - - - 194
Bo, G. - - - - - - - - 186
Booth, S. - - - - - - - 147
Bossanyi, E. - - - - - - 49, 50
Bottone, H. - - - - - - - 194
Bowden, F. P. 8, 10, 69, 70, 73, 74
Boyd, R. W. - - - - - - - 214
Brandt, W. H. - - - - - - 35
Bridgman, P. W. - - - - - 30
Brit Assoc Ind Editors - - - 91
Brit Electr Development Assoc 90
Brueche, E. - - - - - - - 29
Bryjak, E. - - - - - - - 194
Bucheimer Tool Sales Co - - 217
Buehler Ltd - - - - - 166, 194
Buick Motor Div, GMC - - 148
Bunter SA - - - - - - 130, 178

Carbide Tool Co - - - - - 108
Cambridge Univ, Dept Phys - 67
Carborundum Co 96, 108, 146, 148, 176
Abrasives Lab - - - - - 107
Bonded Abrasives Div - - 52
Carriers de Scoufleny - - - 116
Caterpillar Tractor Co - - - 5
Cavendish Lab, Cambridge - 74
*La Ceramica* - - - - - - 94
Churchill, Sir Winston - 86, 171
Christ Church, Port Sunlight - 50
Cina, B. - - - - - - - - 8
Cincinnati Milling Machine Co 148
Coes jun, L. - - - - - - - 94
Combined Opt Ind Ltd - - 198
Cook, R. N. - - - - - - - 6
Corning Museum - - - - - 170
Coventry Gauge & Tool Co Ltd 198, 214
Crafts Centre - - - - - 170
Cratex Mfg Co - - - 110, 148
Czech Academy of Science - - 7
Czech Sci Techn Soc - - - 7

Da Vinci, Leonardo - - - 205
Davenport, G. R. - - - - 217
Degussa - - - - - - - - 90
Denning, R. M. - - - - 68, 74
de Sanno & Co Inc, A. P. - - 148
de Sanno & Son Inc - - - - 109
Detroit Milling Cutter Co (Futurmill Inc) - - - - - 108
Diagrit Diamond Tools Ltd 50, 176, 198
Diamant Boart SA - 89, 116, 188
Diamant Boart Italiana - - 188
Diamant-Verwertungs GmbH - 205
Diamond & Boart Products (Australia) Pty Ltd - - 177, 238
Diamond Dust Co Inc - - - 148
Diamond Mfrs Assoc - - - 28
*Diamond News*, etc - - - - 5
Diamond Res Lab (Johannesburg) 78, 188
Diamond Tool Co - - 5, 147, 148
Diamond Tool Res Co - - - 216
Diamond Trading Co Ltd - - 89
Diamonite Products Mfg Co - 52
Dinkel, E. M. - - - - 171, 172
Douglas Co Ltd, A. - - - 217
Dowding & Doll Ltd - - - 51

Eden, Sir Anthony - - - 171
Eden, Lady - - - - - - 171
Edinburgh, The Duke of - - 171
Ekco Electronics Ltd - - - 88
Eldredge, K. R. - - 68, 69, 74
Elgin Nat Watch Co, Abrasives Div - - - - - - - 148
Elizabeth II, Queen - - - 171
Elliott & Co Ltd, B. - - - 235
Elox Corp of Michigan - - 148
Emmerik, S. - - - - - - 138
Endecotts (Filters) Ltd - - 217
*Engineering & Mining Journal* - 28
Eng Diamonds Ltd - - - - 58
Engis Equipment Co, Hyprez Div - - - - - - - 148

Famir di Rossetto Renzo - - 187
Firth Brown Tools Ltd - - - 88
Flasar, J. - - - - - 168, 169, 194
Florin Ltd, O. - - - - - 217
Form-All Mfg Co - - - - 158
France, The President of - - 171
Friedl, D. - - - - - - - 194
Futurmill Inc (Detroit Milling Cutter Co) - - - - - - 108

Gallenkamp & Co Ltd, A. - - 149
Gallmeyer & Livingston - - 126
Gauge & Tool Co Ltd - - - 78
Gauge & Tool Makers Assoc 58, 85
Gay, P. - - - - - - - - 7
Gemmol Assoc Gt Britain - - 74
Gen Electr Co - - - 96, 146
Metallurgical Products Dept - 148
Gen Electr Co Ltd - - - 112
Gen Motors Corp - - - 148
Gilmore, C. R. - - - - - 217
Ginder, J. C. - - - - - - 28
Giustina & Co SpA - - - 187
Goldsmiths' Hall, London - - 50
Grebenchikov, I. V. - - 33, 36
*Grinding & Finishing* - - 118, 135, 176
Grodzinski, P. - - - 69, 74

Habit Diamond Tooling Ltd - 78
Hahn & Kolb - - - - - - 228
Hammond Machinery Builders Inc - - - - - - 146, 148
Hampton, W. M. - - - - 33, 36
Heiss, A. - - - - - - - 234
Hewitt, A. J. - - - - - - 78
Hilger &Watts Ltd - - - 88
Hirsch, P. B. - - - - - - 7
Holt, G. - - - - - - - 171
Howes, V. R. - - - - 73, 74
Hudson Bay Mining & Smelting Co Ltd - - - - - 153, 174
Hughes, T. P. - - - - - - 10
Hukao, Y. - - - - - - 68, 74
*Hutnické Listy* - - - - - 194
*Hutnik* - - - - - - - 7, 26

IDA See Industrial Diamond Assoc of Am
Impregnated Diamond Products Ltd - - - - - 50, 77, 86
Indusmond Diamond Tools Ltd 86, 148
Industrial Diamond Assoc of Am (IDA) - 78, 98, 106, 112, 148
*Industrial Diamond Review* - - 174
Industrial Distributors (1946) Ltd 74
Industrial Distributors (Sales) Ltd - - - - - - - 89
Industrial Exhibitions Ltd - 59
International Equipment Co 149, 150
International Harvester Co - 238
*Irish News* - - - - - - - 234

Jebsen-Marwedel, H. - - 34
Johnson, A. - - - - 157, 174
Jones & Lamson - - - - 128

Kachalov, N. N. - - - - - 33
Kaller, A. - - - - - 34, 36
Kamm, C. C. - - - - - - 174
Kehl, G. L. - - - - - 190, 194
Kenyon, D. M. - - - 69, 70, 74
Kerry's (Ultrasonics) Ltd - - 90
Kerstens, J. B. S. M. - - - 213
Kieffer, R. - - - - - 167, 194
Kiel, E. - - - - - - 98, 107
Klemm, W. - - - - - - - 33
Knapp, A. S. - - - - - - 19
Koebel, C. J. - - - - - - 128
Koebel Diamond Tool Co 128, 146, 148
Kohn, J. A. - - - - 68, 74

Lamesch - - - - - - - 34
Leitz Instruments Ltd, E. - - 86
Lenchs (Birmingham) Ltd - 112
Lindquist, O. V. - - - - 174
Lizzini, Fratelli - - - - 186
Lockheed Aircraft Corp, Missile Systems Div - - - - 17
Lockheed's Molecular Aerophysics Dept - - - - 19
Lodge Plugs Ltd - - - - - 90
Loezer - - - - - - - 34
Lorant & Co Ltd - - - - 217
Lunn, B. - - - - - - - 9
Lucca, P. D. - - - - - 194
Lyon, Sir William - - - 85

McLeod, G. M. - - - - - 15
*Manchester Evening News* - - 5
*Manchester Guardian* - - - 85
Mann, D. - - - - - - - 6
Marshall, N. K. - - - 17, 19
Martinelli, E. - - - - - - 46
Mastercrafts Ltd - - - - 234
*Metal Powder Report* - - - - 216
Millar Fast Cut Ltd - - - 205
Mineral Res Lab - - - - 148
Ministr, Z. 7, 28, 166, 185, 190, 194
Moens de Fernig, Baron - - 89
Mond Nickel Co Ltd - - - 234
Moore, A. J. W. - - - - - 9
Moran, F. - - - - - - - 86
Morgan Crucible Co Ltd - - 65
Moschkau & Gimpel - - - 209
Moyers, W. R. - - - - - 15
Mullard Ltd - - - - - - 90
Murphy, H. M. - - - - - 74
Myhan, C. A. - - - - - 135

NCR See Nat Cash Register Co
Narber, E. B. - - - - - 217
Nat Cash Register Co - - 109
Metallurgical Res Dept - - 109
Nat College Rubber Technol - 99
Nat Diochemical Co - - - 136
Nesselstraus, G. Z. - - 166, 194
Nichols, W. - - - - - - 6
Northern Miner Press Ltd - - 153
Norton Co - - - - 107, 148

Oberg, D. E. - - - 116, 132
Oberg Mfg Co - - - - - 135
Officine Meccaniche Monzesi 187
Ogryzlo, L. - - - - - - 157
O'Hara, T. A. - - - 151, 172
Ohio Metalworking Products 107, 148
Olivetti, Officina Meccanica - 187
Oppenheimer, Sir Ernest - - 28
Oswald, G. J. - - - - - 109
Outils Reishauer SA - - - 51

Pera See Prod Engg Res Assoc
Pahlitzsch, G. - - - - - 225
Palm, A. I. - - - - - 10, 14
Payne Products Internat Ltd - 237
Peace, D. - - - - - - - 171
*Philips Technical Review* - - - 209
Phys Soc - - - - - - 65, 86
Pirani, M. - - - - - - - 194
Ploegsma, A. W. - - - - - 209
Pocock, S. - - - - - - 170
Pope, A. L. - - 91, 170, 171, 172
Poppa, H. - - - - - - - 29
Powder Metallurgy Ltd - - 216
Powder Metallurgy Res Inst, Vestec - - - - - 7, 26, 194
Pratt & Whitney Aircraft Co - 126
Precision Optical Products - 135
Preston, F. W. - - 29, 32, 33, 36
*Product Engineering* - - - - 6
Prod Engg Res Assoc (Pera) - 66
Proudfoot, G. M. - - - - 174
Pure Carbonic Co, Div of Air Reduction Co Inc - - - 148
Pusch, R. - - - 166, 190, 194

Raffenbeul, G. - - - - - 225
Rayleigh, Lord - - - - 34, 35
Rea, R. F. - - - - - - - 52
Regnier & Co (London) Ltd, Emile - - - - - - - 78
Reishauer Werkzeug AG - - 51
Reuss, C. E. - - 96, 106, 126, 146
Richards, S. - - - - - - 171
Rickenmann, A. - - - - - 51
Rimbach Associates, Richard - 16
Ripple, J. W. - 52, 96, 108, 146, 174
Ruskin, J. - - - - - - - 170

SAIPA SA Industria Pietri Artificiali - - - - - - - 94
Samuels, L. E. - 10, 27, 167, 194
Sandvik Coromant AB - - - 88
Sargent, Sir Malcolm - - - 171
Sartorius Werke AG - - - 228
Satta, V. - - - - - - - 94
Schneider Kreuznach, Dr. Heinrich - - - - - - - 112, 118
Schroeter, K. - - - - - - 194
Schultink, L. - - - - - - 213
Schwarzkopf, P. - - - - 167, 194
Seal, M. - - - - - - - - 67
*Sevenoaks Chronicle* - - - - 214
Shakespeare, W. - - - - - 91
Shaw & Sons (Diamonds) Ltd, A. 87

Sheffield Corp - - - 127, 148
Shelboerg Mfg Co - - - 130, 148
Shell Petroleum Co - - - 126
Shell-Mex & BP Ltd - - - 91
Shoelborg Mfg Co See Shelboerg Mfg Co
Silverman, R. - - - - - 194
Simon, L. - - - - - 30
Sitwell, Sir Osbert - - - 171
Slawson, C. B. - - - 68, 74
Smekal, A. - - - - - 30
Smit & Co Inc, Anton - - 148
Smit & Sons Inc, J. K. - - 174
Smith, D. A. - - - - - 99
*Soc Glass Technol Journ* - - - 29
Sorvall Inc, Ivan - - - 149
Spear & Jackson Ltd - - - 145
Speir, H. L. - - - - - 213
Starlite Industries Inc - - - 148
Steber, E. - - - - - 46
Stephansson, A. - - - - 157
Sterl, K. - - - - - 206
Stern, W. - - - - - 69,74
Stroupe, C. R. - - - - 126
Sudek, B. - - - 7, 26, 166, 190
Suits, G. - - - - - 96
Swimmer, J. - - - - 136, 149
Symons, Rev. V. - - 185, 213, 214

Tabor, D. - 8, 68, 69, 70, 73, 74
Tangerman, E. J. - - - - 6
Tate Gallery - - - - - 50
Tegart, W. J. McG. - - - 9
Threadwell Tap & Die Co - - 195
Timken Roller Bearing Co - 148
Tolansky, S. - - 69, 73, 74, 75
Tolkowsky, M. - - - 68, 74
Tonneson, T. H. - - - - 9
*Tooling & Production* - - - - 96
Torit Mfg Co - - - - 128, 148
Tottle, L. G. - - - - - 28
Triefus Industries Ltd 87, 148, 149
Tube Investments Ltd - - - 74

UCIMU See Unione Costruttori Italiani Macchine Utensili
URMA See Utensili Ravvivatori Mole Abrasive
US Dept Commerce - - - 148
US Nat Bur Standards 214, 215, 217
Unicam Instr Co Ltd - - 90
Unione Costruttori Italiani Macchine Utensili (UCIMU) 186
Universal Diamond Co Ltd 194, 198
Utensili Ravvivatori Mole Abrasive (URMA) - - - - 188

Vacuum Oil Co - - - - 238
van der Wagt, A. J. - - - 213
Van Moppes & Sons (Diamond Tools) Ltd, L. M. - 87, 126, 187
Van Moppes Ltd, S. L. - - 88
Victoria & Albert Museum 50, 170
Vinci, A. - - - - - - - 25

Wallem, G. A. - - - - - 116
Waller, J. - - - - 91, 196, 235
Watson & Son, W. - - - 85
Webb, W. - - - - - 85
*Werkstatt & Betrieb* - - - - 225
Western Electric Co - - - 15
Wheel Trueing Tool Co 28, 146, 148
Whistler, L. - - - 170, 171, 198
Wickman Ltd - - - 6, 16, 77
Wickman Mfg Co - - 98, 148
Wilks, E. M. - - - 68, 72, 74
Wilks, J. - - - - 72, 74
Williamson, J. T. - - - - 28
Wilman, H. - - - - - 8
Wilson, H. W. - - - - 198
Wilson Diamond Tool Co Ltd - 78
*Wire & Wire Products* - - - 15
*Wire Industry* - - - - - 214
Wittenberg, N. - - - - 213
Woodall, C. E. - - - - 53
Worcester Royal Porcelain Co, Ind Ceramics Div - - - 90

York, Archbishop of - - - 171
Young, J. E. - - 69, 70, 73, 74

Zarubin, N. M. - - - - 194
Zeiss AG, Carl - - - - 228
Zocca, Gaetano & Co Sas - - 186



# INDUSTRIAL DIAMOND PUBLICATIONS

**NAG PRESS LTD, 226 Latymer Court, Hammersmith, London, W6.**
(RIVerside 2143).

DIAMOND TECHNOLOGY. Production Methods for Diamond and Gemstone, by P. GRODZINSKI. First published, 1942. 2nd edition, 1953, 840 pp, 486 illustr, 94 tables, indexes, price 52s 6d.

MICROSTRUCTURES OF DIAMOND SURFACES, by S. TOLANSKY, F.R.S. 67 pp, illustr, bibl. 1955. Price 40s.

SIX YEARS' INDEX—to *Industrial Diamond Review*, reviewing carefully the contents of the first six volumes of this journal, 1940-46, thus making the contents easily available for specialist research. 1948. Price 3s.

DIAMOND TOOLS, by P. GRODZINSKI. Comprehensive book, reviewing all industrial applications of diamond. 1944. Price 20s, by post 20s 9d.

MANUFACTURE OF DIAMOND TOOLS AND THEIR APPLICATION IN GERMANY—reprint from a series of articles in *Industrial Diamond Review*, reviewing the German diamond industry; based on Government Reports and Technical Literature. 28 illustr, 15 tables. July, 1948. Price 7s 6d.

IDR REPRINT SERVICE. 12 pp. 9¾ by 7⅝ in. List of reprints available. Classified, authors' index, subject index of groups. September 1958. Free of charge. Reprints 1s each, post free.

HISTORY OF DIAMOND POLISHING, by P. GRODZINSKI. A CONTRIBUTION TO THE HISTORY OF GRINDING, by F. M. FELDHAUS. Bound together. 18 pp, illustr, bibl. 1953. Price 3s 6d.


Printed in Great Britain by Martin's Printing Works Ltd., Berwick-upon-Tweed.